

# New and forgotten species of Tenebrionidae collected by J. A. Wahlberg (1810-1856) preserved in the Swedish Museum of Natural History, Stockholm (Coleoptera, Tenebrionidae)

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A new representative member of the tribe Opatrini, *Neocaedius wahlbergi* n. sp., collected by J. A. Wahlberg in South Africa, Namibia, at Kuiseb R. in 1854 is described and illustrated. Its systematic position and affinities with the closely related species *Neocaedius scabrosus* (Gerstaecker) and *Neocaedius halli* Kaszab are discussed and a key is provided for distinguishing these species. The poorly known monotypic genus *Syggona* Fähraeus 1870, originally placed in the family Lagriidae, later transferred by Gebien (1941) to the Tenebrionidae as a genus incertae sedis, is found to be a junior synonym of the genus *Luprops* Hope 1833 (tribe Lupropini). The new combination *Luprops concinnus* (Fähraeus) is proposed. A lectotype for *Syggona concinna* Fähraeus is designated.

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## Introduction

The Swedish engineer and naturalist, Johan August Wahlberg (1810-1856), explored the Cape region and adjoining regions of South Africa at two expeditions during the period 1839-1856, collecting insects and other animals. An unidentified specimen of Tenebrionidae collected by him in present Namibia and agreeing with the genus *Neocaedius* Pierre, 1972 was discovered by me under *Neocaedius scabrosus* (Gerstaecker, 1873) in the collection of Tenebrionidae of the Swedish Museum of Natural History (Naturhistoriska riksmuseet), Stockholm. *N. scabrosus* was described from West Africa, Tanzania, Zanzibar I. The Wahlberg specimen was identified by me as an undescribed species, clearly separate from all known species of the genus. A description of the new species is given here. Results from a reexamination of type material of *Syggona concinna* Fähraeus collected by Wahlberg in present Botswana are given also, resulting in a synonymization of the monotypic genus *Syggona* Fähraeus.

Museum codens (after Arnett et al., 1993): NHRS Naturhistoriska riksmuseet, Stockholm, Sweden; MZLU – Zoologiska museet, Lunds universitet, Lund, Sweden; ZMHB – Museum für Naturkunde der Humboldt Universität zu Berlin, Berlin, Germany; HNHB – Hungarian Natural History Museum, Budapest, Hungary.

## Description of a new species

*Neocaedius wahlbergi* n. sp.

**Type material.** Holotype, male: Namibia, Kuiseb R. ("Kuisip"), J. Wahlberg leg.; NHRS. Note: The specimen was evidently collected in 1854, according to published data from the itineraries of Wahlberg (Brinck 1955).

**Diagnosis.** General shape of body similar to *N. scabrosus* (Gerstaecker), but readily distinguished by the broader protibiae with internal apex right-

angled (Fig. 9) and the shape of the aedeagus with sides slightly sinuate (Figs. 7 and 8). Habitus Fig. 13.

**Description.** Length: 9 mm. Maximum of width: 5.5 mm. Winged.

Body reddish to blackish brown, the legs, antennae and trophi testaceous, reddish brown. Integument moderately shiny. Head and upper surface densely covered with coarse, confluent, round, irregular, shiny granules.

Eyes small, separated dorsally by a distance equal to 11 times the breadth of an eye. Clypeo-genal line of head strongly sinuate, each antero-genal portion as broadly obtuse as the epistomal excision. Antennae shorter than breadth of head, the third joint about twice as long as broad, joint 4 only slightly longer than broad, 5-6 as broad as long, 7-8 slightly broader than long, 8-11 progressively transverse, 9 nearly twice as broad as long, 10 twice as broad as long, 11 as broad as long, as the precedent but truncate apically and sericeous.

Pronotum broadest at the middle, here twice as broad as long, very densely and uniformly covered with round, coarse and shiny granules that emerge from a fine reticulation of half circles which surround each granule. The space between granules smaller than the diameter of granules and bearing short, yellowish and reclining setae. Anterior margin broadly emarginate, enclosing the head up to the eyes, not margined, except at the sides. Anterior angles roundly obtuse. Sides with fine lateral edge, without margin, furnished with long yellowish, livide and prominent setae, posterior angles almost right, sides rounded and narrowed towards the anterior angles, almost subparallel basally. The latter extremely finely marginated laterally, arcuate, shortly and densely, golden setose.

Elytra a little broader than pronotum, broadest at the middle, where one third longer than broad, sides slightly rounded and humeral angles obtuse. Base shallowly emarginate, less wide than pronotal base, sides with long and dense, livide yellowish, prominent setae, feebly and minutely denticulate. Apical declivity feebly pronounced, forming an angel of about 45° with the horizontal axis of the body. Striae finely impressed, forming longitudinal lines. Intervals even, densely covered with round, coarse, moderately shiny granules and numerous microgranules in between. Pubes-

cence formed by very short, yellowish setae, projecting from each granule which are arranged in 3-5 longitudinal rows on each interval, setae as long as the diameter of the granules.

Underside shiny, episternum slightly concave, deeply and confluent rugose. Prosternal process broadly deflected and apically becoming pointed between coxae. Abdominal sternites densely punctate, rugose, covered with yellowish pubescence, a little longer than that covering the dorsal surface.

Protibiae large, apex right-angled, distal margin with 3 large and rounded teeth, as indicated in Fig. 9. Meso- and metatibiae simple. Tarsi normal, not compressed.

Aedeagus: shaped as in Figs. 7 and 8.

**Distribution.** South Africa, Namibia.

**Derivation of name.** Named after the collector, Johan August Wahlberg, who was tragically killed by an elephant while on an expedition to Lake Ngami, Botswana in 1856.

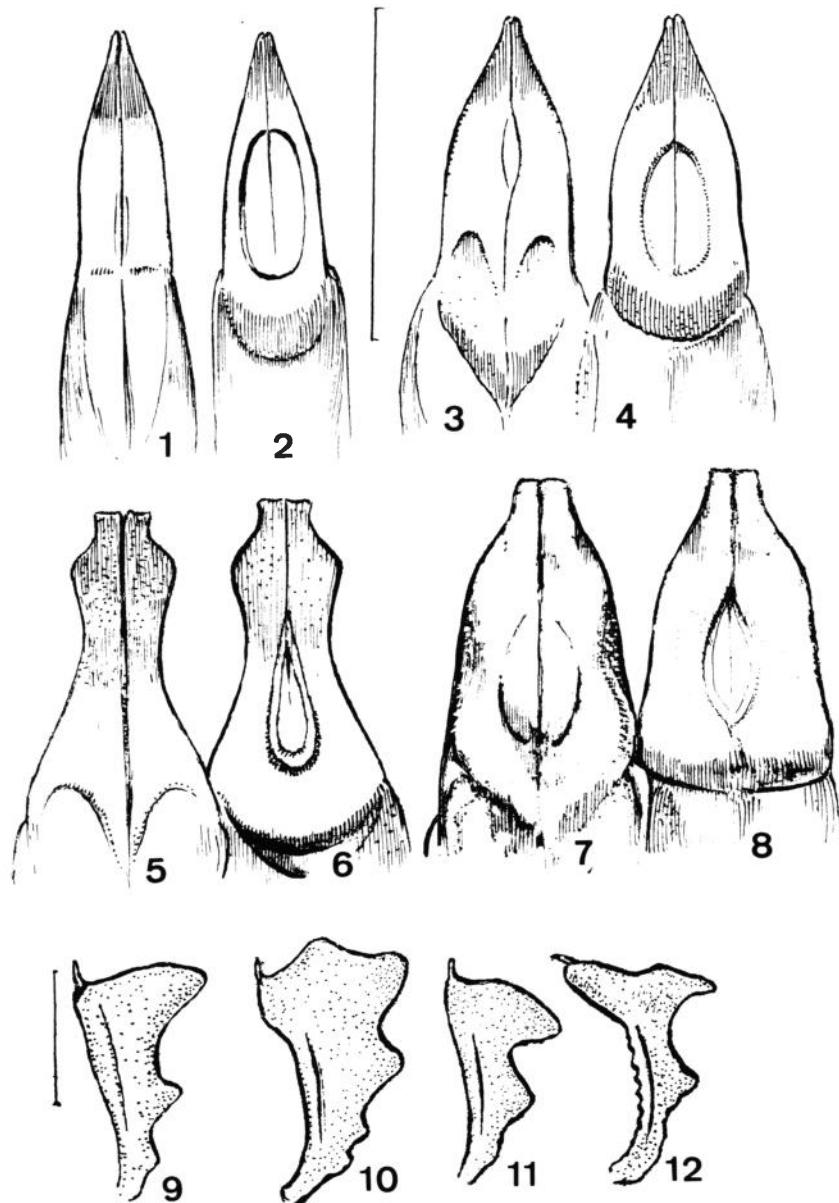
**Systematic position.** The new species occupies an intermediate position between *N. scabrosus* (Gerstaecker) and *N. kochi* Pierre. It can be separated from these species as follows. See also the key published by Pierre (1972).

#### Key to selected species of *Neocaedius*

- 1 Length 9-11 mm. Legs normally shaped, metatarsi simple, not compressed ..... 2
- Less than 9 mm, or metatarsi compressed ..... *kochi* Pierre and other species
- 2 Protibiae interiorly arcuate, apically largely dilated (Figs. 10 and 12) ..... 3
- Protibiae almost rightangled internally (Fig. 9). Aedeagus constricted, sinuate, and pointed (Figs. 7 and 8). South Africa... *wahlbergi* n.sp.
- 3 Protibiae as in Fig. 10. Aedeagus simple, apically pointed (Figs. 3 and 4). East Africa ... *scabrosus* Gerstaecker
- Protibiae as in Fig. 12. Aedeagus clearly dilated and apically truncate (Figs. 5 and 6). West Africa ..... *halli* Kaszab

#### Remarks:

Pierre (1972:968) figured the aedeagi of *N. scabrosus* (Gerstaecker) and *N. halli* Kaszab, but obviously the figure legends were transposed. The figure with the text "*N. halli*" in reality represents the aedeagus of *N. scabrosus* and vice-versa. I was



Figs. 1-12. *Neocaedius*, details. — 1-8. Aedeagus in ventral and dorsal view. — 9-12. Right protibia, dorsal view. — 1-2, *N. pierrei* Ferrer, 3-4, *N. scabrosus* (Gerstaecker), 5-6, *N. halli* Kaszab, 7-8, *N. wahlbergi* n. sp., 9, *N. wahlbergi* n. sp., 10, *N. scabrosus* (Gerstaecker), 11, *N. pierrei* Ferrer, 12, *N. halli* Kaszab. Scale lines= 1 mm.

Detaljer av svartbaggar av släktet *Neocaedius*. 1-6. Aedeagus sedd ovan- och underifrån. — 9-12. Höger framtibia sedd ovanifrån

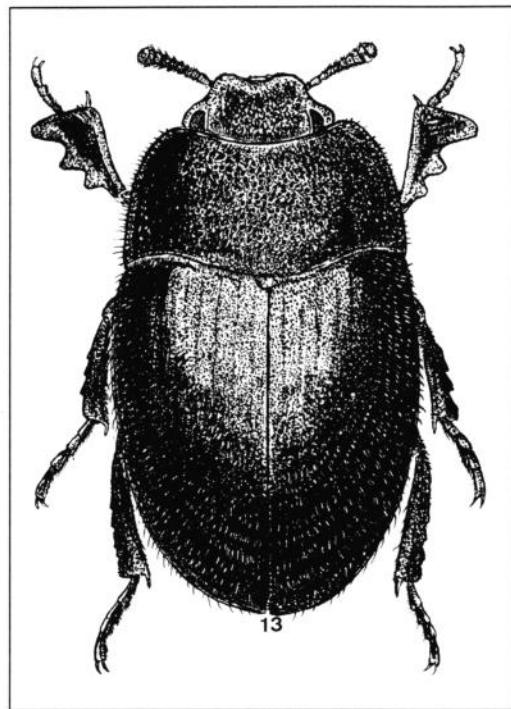


Fig. 13. Habitus, *Neocaedius wahlbergi* n. sp., male (holotype). Actual body length = 9 mm.

Typexemplaret av svarbaggen *Neocaedius wahlbergi*, en nio mm lång hane, som här beskrivs som ny för vetenskapen. Arten insamlades av den svenska naturforskanen Johan August Wahlberg år 1854 i nuvarande Namibia. Två år senare dödades Wahlberg tragiskt av en elefant, under en expedition till Ngami-sjön i Botswana.

confused by this error when describing *Neocaedius pierrei* Ferrer (Ferrer 1989) but examination of the types resolved the error and the figures of the aedeagi are correctly assorted here.

#### Notes on type materials

*Neocaedius scabrosus* (Gerstaecker) was originally described in the genus *Cyptus* Gerstaecker (Gerstaecker, 1873: 182). I examined one female specimen labelled, "Ins. Sansibar, Deck scabrosus Gerst./typus (modern label)/56621/Cyptus Gerst." (ZMHB). The specimen agrees with the original description and is by definition the holotype of *Cyptus scabrosus*, as Gerstaecker states that his description was based on a single specimen.

I examined a paratype of *N. halli* Kaszab from Sierra Leone, Njala, 28.V.1926, leg. E. Hargreaves (HNHM). The aedeagus and protibia are figured here (Figs. 5, 6 and 12).

#### Synonymy of the genus *Syggona* Fåhraeus

Fåhraeus (1870:330) established the monotypic genus *Syggona* for a species named *concinna* by him and collected by Wahlberg in "Caffraria" (East Cape Province). He regarded this species as a member of Lagridae. Gebien (1941:552) transferred *Syggona* to the family Tenebrionidae, placing it as a genus incertae sedis in an isolated position after the tribe Strongyliini. Examination of type material of *Syggona concinna* (female syntypes in NHRS) and additional material of the species from other localities (below) proved that *Syggona* is a junior synonym of *Luprops* Hope, 1833 (= *Lyrops* auct.). The latter genus belongs in the subtribe Lupropina (sensu Ardoen 1961) (=Heterotarsini sensu Gebien [1941:817 (672)] of the tribe Lupropini (Tenebrionidae: Lagrinae sensu Doyen et al. 1989).

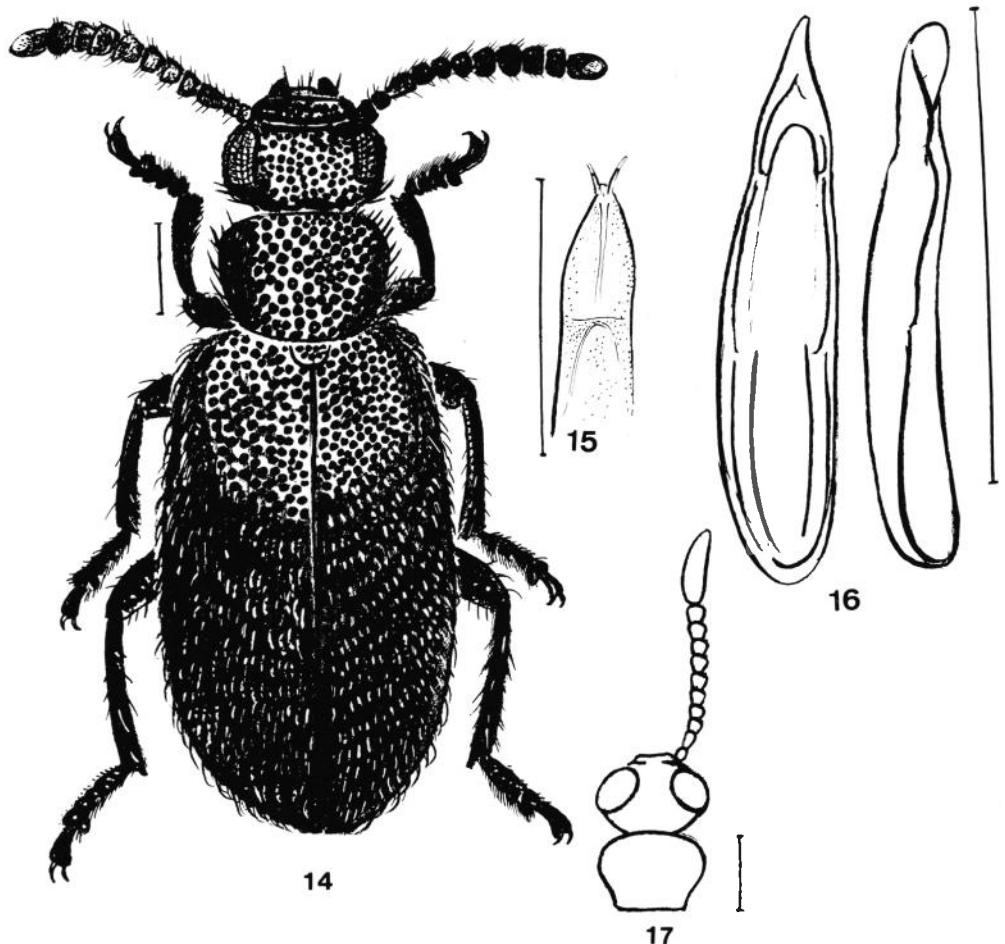
#### *Luprops concinnus* (Fåhraeus) comb. nov.

*Syggona concinna* Fåhraeus, 1870: 330

**Designation of lectotype.** There are three specimens under *Syggona concinna* Fåhraeus in the collection of NHRS qualifying as syntypes, all females labelled "Caffraria/J. Wahlb.". One specimen was chosen as lectotype with the addition of my own labels: "Lectotype *Syggona concinna* Fåhraeus, J. Ferrer 1994" and "*Luprops concinnus* (Fåhraeus) comb. nov., J. Ferrer det., 1994". The other two specimens are designated as paralectotypes (females) and labelled accordingly by me.

Habitus of the female lectotype, the weakly chitinized valves exhibiting characteristic styli of the female genitalia, the strongly dimorphic male with extremely large eyes, longer antennae and shorter pronotum, and the aedeagus are shown in Figs. 14-17.

**Additional material examined.** 1 female, "Ngami" (old Bechuanaland, in Botswana: 20.30°S - 22.46°E), J. Wahlb. leg (NHRS); 1 male, 1 female, South Africa, Transvaal, N Pretoria, 6.VI.1954, G. Rudebeck leg (ZMUL).



Figs. 14-17. — *Luprops concinnus* (Fåhraeus). — 14, habitus, female (lectotype), 15, female genitalia, 16, male aedeagus, 17, head and pronotum of male. Scale lines= 1mm.

14. Hona (lectotyp) av svartbaggen *Luprops concinnus*. — 15. Hongenitalier. — 16. Aedeagus. — 17. Hane, huvud och pronotum

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### Sammanfattning

Johan August Wahlberg (1810-1856) samlade insekter och andra djur under sina resor i Sydafrika. En ny tenebrionidart, *Neocaedius wahlbergi* n. sp., från Naturhistoriska Riksmuseets samling insamlad av Wahlberg i nuvarande Namibia beskrivs och jämförs med de närliggande afrikanska arterna *N. scabrosus* (Gerstaecker) och *N. halli* Kaszab. En nyckel för att skilja dessa från några andra arter bifogas. En annan art, insamlad av Wahlberg i "Caffraria" (Östra Kap-provinsen) beskrevs av Fähraeus (1870:330) under namnet *Syggona concinna*, som tillhörande familjen Lagriidae. Det monotypiska släktet *Syggona* Fähraeus överfördes av Gebien (1941: 552/897) till fam. Tenebrionidae utan systematisk inplacering. Studium av tre syntyper och exemplar från Botswana (Riksmuseet) och Transvaal (Zoologiska museet, Lunds Universitet) visar att *Syggona* är en yngre synonym till släktet *Luprops* Hope, 1833, vilket innebär att Fähraeus art skall benämnas *Luprops concinnus* (Fähraeus). Släktet *Luprops*, som förutom i Afrika även är representerat i Asien och Australien, placerades i det gamla tribuset *Heterotarsini* i Gebiens Katalog (1941: 817/672) men förs numera till underfamiljen Lagriinae, tribus Lupropini (sensu Doyen et. al. 1989). En lectotyp har utsetts för *Syggona concinna* Fähraeus.

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